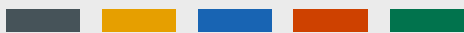


# STATE ENERGY EFFICIENCY COST RECOVERY MECHANISMS

## How We Pay and Incentivize Utilities to Accelerate Energy Efficiency



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## Executive Summary

For decades, utilities have offered energy efficiency programs to help customers use energy more efficiently. Common examples of programs include providing free or discounted energy audits, offering rebates and incentives to encourage the purchase of energy-efficient appliances, and conducting education and outreach initiatives to help customers learn about energy efficiency. These programs offer numerous benefits, including lower energy costs, reduced greenhouse gases (GHGs) and other emissions, public health improvements, and greater grid resilience and reliability.

Cost recovery mechanisms are a significant determinant in the success of energy efficiency programs because they allow utilities to recover the costs incurred to design and implement them. Specifically, cost recovery mechanisms define how, when, and how much electric utilities are compensated for offering energy efficiency programs through the rates they charge to customers. They are defined at the state level through a combination of legislation and regulation by state public utility (PUC) commissions.

State regulators have taken various combinations of approaches in defining these policies. These differences in design affect utilities and customers financially, as well as the effectiveness of energy efficiency programs in achieving their objectives. One common cost recovery approach is to allow utilities to recover their program spending through a fixed charge on customers' bills (known as a "rider"). While this approach provides utilities with a predictable revenue stream, it may not sufficiently incentivize utilities to prioritize cost-effective energy efficiency programs or encourage customers to participate in their programs.

Alternatively, performance-based incentives allow utilities to earn a financial reward based on the achievement of certain performance indicators, such as a program's energy savings, net benefits, or number of participants. This approach can incentivize utilities to encourage customer participation or prioritize cost-effective programs, for example. However, it also introduces greater financial risk for utilities, as they may not earn the expected rewards if the program fails to achieve such targets.

The design of cost recovery mechanisms also affects customers' energy bills, including which customers pay, how much, and over what length of time. Riders, for example, increase customer bills regardless of whether a customer participates in (and benefits from) an energy efficiency program. State regulators have taken a variety of approaches in defining how a utility may recover compensation from its customer base. This includes the extent to which compensation is recovered through the rates of customer classes or solely from the customer class targeted by a program. This suggests the need for careful policy design to manage equitable rate impacts among customers.

In recognition of this policy's financial impact on utilities and customers, as well as its influence in the effectiveness of energy efficiency programs, this project reviews the energy efficiency cost recovery mechanisms of three states: North Carolina, Illinois, and Vermont. We sought to better understand the key inputs and methodologies of each state's mechanism and how these might differently affect utility revenue and customer bills compared to the total costs and benefits of an energy efficiency program. More broadly, we also sought to examine how the design of state cost recovery mechanisms might structurally incentivize or motivate utility actions related to energy efficiency investments.

To explore these questions, we developed an Excel-based modeling tool that allows a user to simulate and compare the financial impact of an illustrative energy efficiency program under the cost recovery mechanisms of North Carolina, Illinois, and Vermont. The model calculates outputs at the program level, projecting the financial impact of an individual energy efficiency program offered by a utility in one year.

To use the tool, a user first submits a series of inputs to characterize the energy efficiency program under consideration, as well as the assumed customer base and utility profile. These inputs are held constant across all states to isolate the effect of different policy choices across the three states. The model contains a comparison dashboard to allow users to compare how an energy efficiency program would differently impact utility revenue and customer energy bills under the cost recovery mechanisms of each state.

This model was developed by first constructing individual models capable of simulating the financial impact of each state's cost recovery mechanism. These were developed through review of publicly available material, including utility rate cases, state legislation, and PUC rules. We then took efforts to adjust the models to increase their comparability across states. This was accomplished by making certain assumptions and adjustments to the modeling of state mechanisms to reconcile more inconsequential differences across states (for example, standardizing minor differences in how states defined customer classes).

The cost recovery mechanisms of North Carolina, Vermont, and Illinois differ in several ways. These include the types of compensation utilities may recover for offering an energy efficiency program, how compensation is calculated and which customers are then charged through rates, and the amount of time over which costs are recovered. For example, while all three states allow the utility to recover program spending, only North Carolina and Illinois allow opportunities to earn performance incentives and only North Carolina allows utilities to recover lost revenue due to a program's efficiency improvements. As another, North Carolina's mechanism directs utilities to recover compensation solely to the customer class targeted by a certain energy efficiency

program, whereas compensation is socialized across all customer classes in Illinois and Vermont.

This model is intended for use by state utility regulators, advocates, and other stakeholders and policymakers in utility regulation and energy efficiency policy. We hope to provide them with a flexible tool to better understand the impact of cost recovery mechanisms on utility revenue and customer rates. This model can be run for any real or hypothetical energy efficiency program. Users may also customize a range of assumptions such as the discount rate and customer energy usage. Through efforts taken to standardize certain assumptions, users are better able to compare impacts across states.

Our comparison dashboard can help to translate seemingly small differences in policy design – and complex and technical calculations – into a more accessible visualization of impacts. We hope that this tool helps provide users with a deeper understanding of cost recovery mechanism, and improved awareness of different state approaches. This may allow them to consider alternative approaches to the design of cost recovery mechanisms in a way that might better support the policy objectives of their state.

# Introduction

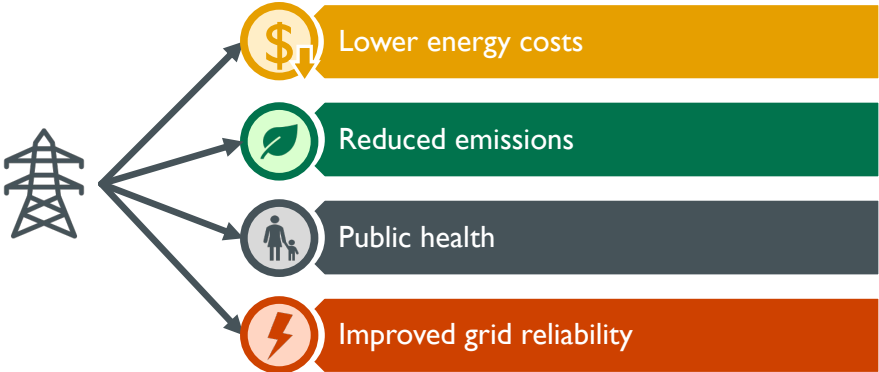
Energy efficiency – or the use of less energy to perform the same task or service – lowers costs, increases the resilience and reliability of the electric grid, and provides other important environmental, community, and health benefits (DOE, 2023). These multiple benefits often accrue to many different entities – well beyond the entity taking action to improve their or others’ efficiency (IEA, 2019).

Electric utilities are well-suited to help customers increase their household energy efficiency. This is in large part due to the direct relationships they have with customers, as well as their access to financing and energy management capabilities (ACEEE, 2017).

Many utilities have offered energy efficiency programs to their customers for decades. Some of the common types of energy efficiency programs that utilities may offer to their customers include providing free or discounted energy audits, offering rebates and incentives to customers who invest in upgrades such as more energy-efficient appliances, and conducting education and outreach initiatives to help customers learn about energy efficiency practices and technologies (DOE, n.d). The specific programs offered by utilities can vary widely depending on factors such as geography, customer demographics, and regulatory requirements.

Energy efficiency programs commonly offer a variety of important benefits. These accrue not just to the customer(s) who participate in the program, but also to the utility, the broader customer base, and the environment. (DOE, 2023). While exact benefits vary by program, common types include lower energy costs, reduced emissions of GHGs and other air pollutants, and public health improvements resulting from cleaner air. Energy efficiency programs can also help to improve grid resilience reliability. Reduced energy usage helps minimize the congestion and stress on the grid, which then reduces power disruptions (DOE, n.d.). These benefits are summarized in Figure 1.

**Figure 1: Common Benefits of Utility Energy Efficiency Programs**



## The Challenge: Aligning Utility Business Models with Energy Efficiency

However, the nature of traditional utility business models tends to conflict with utility incentives for offering such programs – thus, impeding the development of energy efficiency resources and their many associated economic, environmental, and other benefits.

This is because traditional utility business models tend to create conflicts between a utility's financial objectives and the objective of energy conservation.

For example, if a utility invests capital in transmission or a generation facility, the financial model in most states allows them to recover both the initial capital costs in addition to a return (profit) on that investment as part of the rates they charge customers for using electricity. In contrast, if a utility were to use the same funds to instead offer energy efficiency programs, most of the utility spending do so (including program design, marketing, and program management costs, as well as the costs of incentives offered to customers to encourage them to adopt energy-saving measures) would be treated instead as operating expenses rather than capital investments under the typical utility business model. As such, these expenditures would be “passed through” to customers without providing the utility with an opportunity to gain a return. Thus, without a mechanism to recover direct operating expenses and inherent financial disincentives to utilities in a clear and timely manner, utilities may be hesitant to invest in energy efficiency programs.

Furthermore, while these investments can lead to significant bill savings for customers, they also result in reduced electricity sales and revenues for the utility. Specifically, offering programs to help customers reduce their energy consumption is in direct conflict with the traditional “through-put” incentive of many utilities (i.e., that a utility's revenue is linked to the amount of energy or electricity it produces or sells). Lastly, even if a utility is provided a financial remedy to these two factors – such that their offering energy efficiency programs will not negatively impact their balance sheet – energy efficiency programs may encounter a third barrier – in that a utility will still consider the opportunity for shareholder earnings compared to those associated with alternative utility investments.

Together these factors can provide a strong disincentive for utilities to invest in energy efficiency offerings for their customers. These barriers can be particularly challenging to investor-owned utilities (IOUs), who are required to report to their investors and shareholders (ACEEE, 2019).

## The Critical Role of Cost Recovery Mechanisms

Cost recovery mechanisms – which serve as the focus of this project – are state-level policy interventions intended to re-align the financial incentives of utilities or other entities with energy efficiency objectives. Cost recovery mechanisms define how utilities are compensated for providing these programs – and, in return, how customers are charged through bills. They are commonly defined by state legislators and/or state public utility commissions (PUCs).

### What Are Cost Recovery Mechanisms?

Cost recovery mechanisms define how, when, and how much regulated electric utilities are compensated for offering energy efficiency programs to customers.

First, cost recovery mechanisms define the types of compensation a utility may receive for offering an energy efficiency program. These may include:

- Recovery of utility spending incurred to offer energy efficiency programs;
- Eligibility for performance incentives, which financially incentivize utilities to achieve certain targets or savings through energy efficiency programs; and
- Rate adjustment mechanisms or other forms of decoupling to compensate utilities for reduced revenues due to increased customer energy efficiency.<sup>1</sup>

These aggregated funding streams comprise a utility's total compensation (often referred to as its revenue requirement). Cost recovery mechanisms also define how the utility recovers this compensation, and over what timeline.

Lastly, cost recovery mechanisms also define cost allocation, or how a utility's total compensation is recovered through and allocated among its customers.

Such policies provide a means for utilities to recoup the expenses associated with implementing energy efficiency programs, as well as to earn a return on their expenditures or investment in such programs. One way this is accomplished is through

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<sup>1</sup> Decoupling policies are designed to remove the “throughput incentive” of utilities, which is the financial motivation to increase energy sales for higher earnings. One example of this type of policy is a Lost Revenue Adjustment Mechanism (LRAM), which helps to align the financial objectives of utilities with those of energy efficiency. LRAM is a common form of decoupling (NCSL, 2023).



the capitalization of certain energy efficiency costs.<sup>2</sup> As another example, certain states allow utilities to earn performance incentives based on program performance.

In sum, cost recovery mechanisms play a key role in encouraging utilities to invest in energy efficiency programs. As such, these policies critically influence the level of energy efficiency adoption and corresponding benefits.

Note: Throughout this report, we will refer to these policies as “state cost recovery mechanisms.” However, we acknowledge that “public utility commission energy efficiency cost recovery mechanisms” may be a more precise (albeit lengthy!) term.

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<sup>2</sup> Cost recovery through capitalization involves treatment of utility program spending like an investment in physical capacity. The purpose of capitalizing what would otherwise be treated as operating expenses is to better line up the time benefits associated with the expenditures are incurred with the length of time in revenues to cover the costs are collected. Under cost capitalization, unamortized costs and an approved rate of return is added to the utility’s revenue requirement in later years when they are amortized. These costs are then passed along to the customer through rates (ACEEE, 2017)

## Project Objective and Approach

State regulators have taken a variety of approaches in defining utility cost recovery mechanisms for energy efficiency programs, all amidst the backdrop of unique and rapidly evolving state regulatory environments. State approaches differ, for example, with respect to the recovery of program spending and financial incentives and penalties, as well as with respect to overall energy efficiency goals and complimentary policies. In 2016, ACEEE characterized these differences in state energy efficiency policy frameworks as a “continuing experiment... with each state’s regulatory regime taking a different approach to governing [energy efficiency].”

Such differences between states are of interest because these policies determine the financial impacts of energy efficiency programs on utilities and customers. For example, small differences in mechanism design directly affect a utility’s incentive (or lack thereof) to increase energy efficiency.

Seemingly small differences in state mechanism design also affect how much a utility’s customer base “pays” for these programs as a whole and how such payments are allocated to different types of customers. This raises questions surrounding equity and equitable cost allocation among customers. When utility compensation for providing energy efficiency programs is recovered through rates, this means that such costs are borne by all ratepayers, not just those who participate in the programs. This suggests the need for careful policy design in order to balance a level of socialized cost sharing sufficient to overcome the barriers to (and socialized benefits of) energy efficiency – with the recognition that ratepayers who do not participate in energy efficiency programs may object to paying far more than the direct and social benefits they obtain.

Thus, this project aims to better understand how state cost recovery mechanisms differently compensate utilities for offering energy efficiency programs and how these differences affect customers’ electric rates and energy bills.

Specifically, we sought to answer the following research questions:

1. What are the key inputs and methodology features of state cost recovery mechanisms? How do these differ across states?
2. How do state cost recovery mechanisms differently affect utility revenue and customer energy bills over time in comparison to the total costs and benefits of an energy efficiency program?
3. How might the design of state cost recovery mechanisms structurally incentivize or motivate actions related to energy efficiency by customers and utilities?

## Project Approach

We sought to explore these questions through the development of an Excel-based modeling tool that allows users to simulate and compare the expected financial impact of a hypothetical energy efficiency program on utility revenue and customer energy bills under different state cost recovery mechanisms.

The model is intended for use by state utility regulators, advocates, and other stakeholders and policymakers in utility regulation and energy efficiency policy.

Of note, our objective in developing a model is not to identify – or guide a user toward – the “best” mechanism. Perspectives on this topic will differ vastly between utility customers, IOUs, environmental advocates, and state public utility regulatory commissions, based on the entity’s objective and own perspective.<sup>3</sup> Rather, our objective is to create a flexible tool that allows users to better understand and compare key design differences in cost recovery mechanisms and how such differences translate to changes in utility revenue and customer rates. Users can take data provided by the model to draw their own conclusions and insights relative to their personal objectives.

We took the following approach to construct this model:

- First, we conducted a literature review to better understand state energy efficiency cost recovery mechanisms and complementary energy efficiency policies.
- Second, we selected the cost recovery mechanisms of three states for comparison in our model: North Carolina, Illinois, and Vermont (The reasoning for the selection of these three states is outlined later in this section).
- We developed three Excel-based models that simulate the financial impacts of the cost recovery mechanisms currently in use in the three chosen states. The models were developed based on the review of publicly available information and discussion with utility regulators and other subject matter experts.
- Several adjustments were made to each state-level model to increase the level of comparability across the three state mechanisms. This included, for example, making certain assumptions to enable the standardization of customer class

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<sup>3</sup> Of note, perspectives will often differ *within* one of these categories as well. For example, one customer may prefer lower rates and object to a cost recovery method that effectively socializes the costs of energy efficiency programs in which they did not participate or from which they did not benefit. Another more environmentally-minded customer might be more willing to pay more for energy efficiency programs, regardless of whether they reap the benefits of the program.

definitions (residential, commercial, and industrial) across states. A full list of these adjustments is detailed in the Appendix.

- After the three state-level models were finalized, we created a comprehensive list of the information required to run the model in each state. Our model uses this information as inputs that are held constant across all states. Inputs pertain to aspects such as a defined energy efficiency program (including its estimated costs and benefits), utility-specific assumptions, and customer data. Inputs are detailed in Figure 2.
- Finally, we built a comparison dashboard to allow users to understand how each mechanism differently impacts utilities and customers – relevant to a program’s assumed estimated costs and benefits. The metrics compared in the dashboard can be found in Figure 3.

Throughout this process, we compiled extensive documentation of our modeling methodology. This is contained in the Appendix.

### Three States for Comparison

Recognizing that no two cost recovery mechanisms are alike, we targeted our efforts on a closer examination of the cost recovery mechanisms of three states: North Carolina, Illinois, and Vermont.

We chose to focus on these three states for several reasons. These include:

- Sufficient level of comparability among state cost recovery mechanisms.
- Presence of meaningful differences between state cost recovery mechanisms, to allow for interesting comparison. Factors of difference include the cost recovery method employed, the availability of utility performance incentives, and the use of lost revenue adjustment mechanisms (LRAM) or other forms of decoupling to remove the through-put incentives of a utility. Additional factors include a state mechanism’s relative level of complexity, the length of time for cost recovery, and a state’s broader regulatory context and other policies related to energy efficiency.
- Availability and accessibility of information about a state’s cost recovery mechanism, including detailed explanations and documentation on methodology. This included financial worksheets submitted by utilities during routine cost recovery dockets or rulemakings.

Our modeling tool replicates the cost recovery mechanisms of the three states. For the remainder of this report, we will refer to these mechanisms as the NC Mechanism, the IL Mechanism, and the VT Mechanism.

Before examining the design of each state's cost recovery mechanism in greater detail, it is important to consider the underlying regulatory environment in each state, as well as similarities and differences between them.

The following summarizes the regulatory context of the three states, particularly regarding utility regulation and energy efficiency:

- **North Carolina:** The North Carolina Utilities Commission (NCUC) regulates the state's three large electricity IOUs: Duke Energy Progress (DEP), Duke Energy North Carolina (DEC), and Dominion Energy. These utilities operate in a vertically integrated electricity market, meaning that they own both generation and distribution assets. Energy efficiency cost recovery is defined through a combination of the NCUC and state statute. In addition, North Carolina has implemented a renewable portfolio standard containing specific energy efficiency carveouts to promote the development of renewable energy and energy efficiency resources (NCUC, 2021).
- **Illinois:** The three IOUs in Illinois are regulated by the Illinois Commerce Commission (ICC). Illinois has a deregulated electricity market, which allows customers to choose their electricity supplier. The ICC oversees and sets energy efficiency goals for the state's electric utilities: Commonwealth Edison (or ComEd), Ameren Illinois, and MidAmerican Energy Company. The state also has a specific energy efficiency portfolio standard that requires utilities to meet annual energy savings targets through their efficiency programs.
- **Vermont:** The Vermont Public Utility Commission (VT PUC) oversees regulation of the state's 22 electric utilities. In 1999, the VT PUC approved the creation of a statewide energy efficiency utility to provide energy efficiency programs to customers throughout the state. Since then, energy efficiency programs have been provided by two energy efficiencies: Efficiency Vermont and Burlington Electric Department. Efficiency Vermont is operated by the nonprofit Vermont Energy Investment Corporation (VEIC) and is funded through a combination of a customer energy efficiency charge and revenues from ISO New England's Forward Capacity Markets and Regional Greenhouse Gas Initiative (RGGI) allowance auctions (VT PUC, n.d.). This project focuses on the cost recovery mechanism used by Efficiency Vermont, which is defined by the VT PUC.

A greater understanding of a state's regulatory environment may help to provide context and insight into the design of a state's cost recovery mechanism.

## Modeling Tool

We developed an Excel-based modeling tool that allows users to simulate and compare the expected financial impact of a sample energy efficiency program on utility revenue and customer energy bills under the cost recovery mechanisms of three states. This allows for comparison of how the mechanisms differ in their inputs (e.g., what key variables drive a utility's revenue and customer impacts) and their outputs (e.g., their effects on customers and utility revenue).

### How to Use this Model

To use the model, the user first enters several inputs that are held constant across all states. Inputs relate to the energy efficiency program under consideration, including estimated costs and benefits; utility-specific assumptions, and customer data, among others. The model simulates the effect of the cost recovery mechanisms of North Carolina, Illinois, and Vermont. Primary model outputs are the financial impacts to utilities and their customers under each cost recovery mechanism.

Figure 2 depicts the key inputs and outputs of the model.

### Strengths and Limitations

Users can use the models to compare impacts across states, as well as relative to an illustrative energy efficiency's programs lifetime costs and benefits. Each of the three state-specific models may also be used individually. For example, a user could choose to use a single state model rather than the three state models and rather understand the impact of changing assumptions, or to merely understand the components of utility revenue stemming from an illustrative energy efficiency program in that state.

This model was designed for the comparison of impacts for energy efficiency program offerings; it does not incorporate functions necessary to determine the impacts of demand response programs. The construction of the model was also focused on residential programs and less so on commercial and industrial energy efficiency programs.

### Methodology

The Appendix contains in-depth description of each state cost recovery mechanism, including how utility compensation and customer riders are calculated for a sample energy efficiency program. It also describes our modeling methodology, including simplifying assumptions or deviations made from a state's stated methodology, with explanations where appropriate.

**Figure 2: Energy Efficiency Cost Recovery Mechanism Model**

Inputs	Outputs
<p><u>Energy Efficiency Program Data:</u></p> <ul style="list-style-type: none"> <li>• Customer Class Targeted</li> <li>• Low-income Program (Y/N)</li> <li>• Measure Life (years)</li> <li>• Program Spending (O&amp;M, A&amp;G, EM&amp;V) (\$M)</li> <li>• Utility Foregone Revenue from Program (\$M)</li> <li>• Annual Energy Savings from Program (MWh/year)</li> <li>• System Avoided Costs from Program (\$M, NPV)</li> </ul> <p><u>Utility-Specific Inputs:</u></p> <ul style="list-style-type: none"> <li>• Utility WACC (%)</li> </ul> <p><u>Customer Data (by customer class):</u></p> <ul style="list-style-type: none"> <li>• Annual Energy Usage (kWh)</li> <li>• Annual Rate Revenue (\$)</li> <li>• Assigned Costs (\$)</li> </ul> <p><u>Other Inputs:</u></p> <ul style="list-style-type: none"> <li>• Year of Program Offering</li> <li>• Discount Rate (%)</li> <li>• Average GHG Intensity of Electric Generation (lb/MWh)</li> </ul>	<p><i>Outputs are calculated under each state cost recovery mechanism:</i></p> <p><u>Utility Impacts:</u></p> <ul style="list-style-type: none"> <li>• Total Utility Revenue Requirement (RR) (\$M, annual &amp; NPV)</li> <li>• Utility RR by Component (\$M, annual &amp; NPV)</li> </ul> <p><u>Customer Impacts:</u></p> <ul style="list-style-type: none"> <li>• Total Utility RR Collected from All Customers (\$M, NPV)</li> <li>• Total Utility RR Collected by Customer Class (\$M, NPV)</li> <li>• Rider by Customer Class (\$/kWh by year)</li> </ul> <p><u>Other Impacts:</u></p> <ul style="list-style-type: none"> <li>• Cost recovery period (number of years)</li> <li>• Est. GHG Reductions (MT CO<sub>2</sub>e, annual &amp; total)</li> </ul>

Figure 2 presents a high-level comparison of the key elements and outputs of the three cost recovery mechanisms.

**Figure 3: Comparison of State Energy Efficiency State Cost Recovery Mechanisms**

	NC Mechanism	IL Mechanism	VT Mechanism
<b>Program Administrator</b>	IOU	IOU	Statewide energy efficiency utility
<b>Utility Compensation Opportunities:</b>			
• Program spending recovery (\$)	✓	✓	✓
• Lost revenue recovery (\$)	✓	X	X
• Performance incentive (\$)	✓ <i>based on program (net) dollar savings</i>	X	✓ <i>based on achievement of performance indicators<sup>4</sup></i>
<b>Compensation Calculation</b>	Primarily at individual program-level <sup>5</sup>	Aggregated across program portfolio	Aggregated across program portfolio
<b>Capitalization and Amortization of Expenses</b>	✓	✓	X
<b>Customer Allocation</b>			
• Rider (\$/kWh)	✓	✓	✓
• Assignment of Costs	Targeted customer class only <sup>6</sup>	Entire customer base	Entire customer base of state <sup>7</sup>
<b>Length of Recovery Period</b>	Over 1-3 years <i>depending on program life</i>	Over program lifetime	During same year of program

### Case Study

Below is a sample of the types of charts included in the model's comparison dashboard. They show the types of financial impacts the model is capable of calculating, as well as how these impacts are visualized and compared across states.

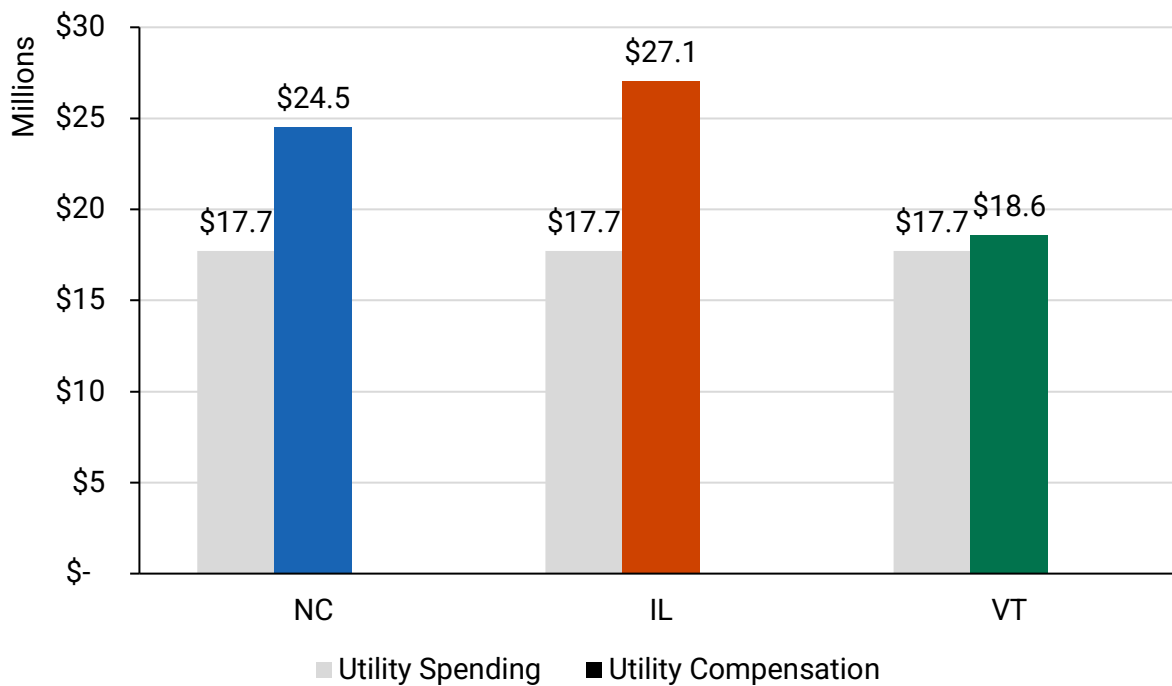


The charts below come from a case study conducted for an illustrative sample energy efficiency program. We will assume that the utility must spend 18 million dollars to offer this program. The program is targeted towards residential customers and has an estimated measure life of 22 years. This means that the energy savings it is expected to provide energy savings and associated monetized benefits for 22 years.

Of note, the input energy efficiency program is an illustrative program, and thus conclusions should not be drawn from these charts about each mechanism with respect to this individual program.

Figure 4 compares the amount of compensation a utility would receive for spending \$18 million to offer this sample program under each state mechanism.

**Figure 4: Utility Spending vs. Compensation for a Sample Program by State (\$M, NPV)**



<sup>4</sup> In Vermont, the performance incentive (“performance award”) is calculated as a percentage of a portion of utility program expenses. The percentage is determined by the utility’s achievement of Quantifiable Performance Indicators, with the utility earning 100 percent of the award if they meet the 100 percent target of each indicator. See the Appendix for more details.

<sup>5</sup> In North Carolina, utility compensation is calculated first at the individual program level. This is then aggregated across programs to the portfolio level, where additional expenses and/or incentives are calculated. See the Appendix for more details.

<sup>6</sup> For example, utility compensation for an energy efficiency program targeting residential customers would be recovered through residential customers only.

<sup>7</sup> Of note, Efficiency Vermont’s customer base consists of the customer base of all utilities in the state, excluding those served by the Burlington Electric Department.

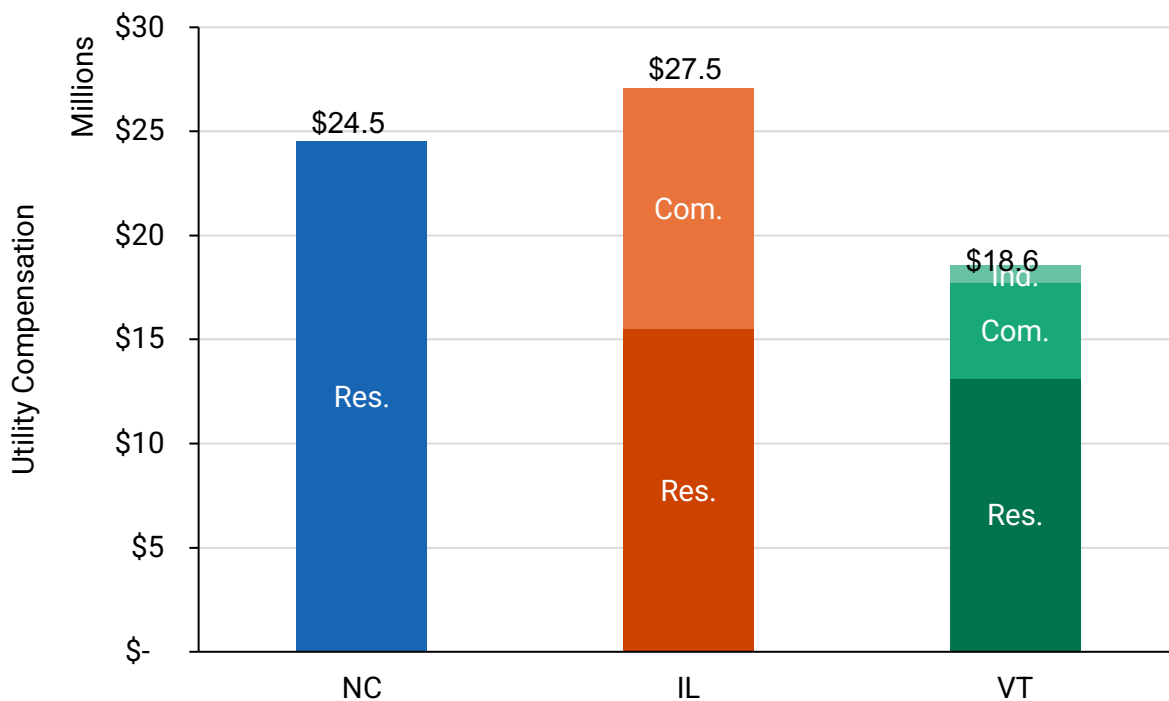
As we can see, the utility would receive different amounts of compensation for offering the same program – with the same assumed costs and benefits – in each state.

In this case study, these differences in compensation stem in part from the longer measure life of this sample program. The IL Mechanism allows utilities to amortize compensation over the full 22-year lifetime of the program. Importantly, it also allows utilities to earn rate of return on deferred costs. In contrast, the other two state mechanisms do not consider a program’s measure life as a variable in determining utility compensation. For example, the VT Mechanism requires utilities to recover all compensation in the same year the program is offered, regardless of its measure life. Under the NC Mechanism, utilities may amortize and earn a rate of return on deferred costs for the lesser of three years or the measure life of the program.

Another factor to consider when comparing the differences in Figure 4 is the discount rate used to calculate the net present value (NPV) of utility compensation. The NPV of utility compensation under each mechanism will vary depending on the discount rate used. This case study assumes a discount rate of 4.2 percent.

Figure 5 compares how a utility’s total compensation would be allocated across residential, commercial, and industrial customer classes through rates.

**Figure 5: Utility Compensation Recovered by Customer Class for a Sample Program by State (\$M, NPV)**



In North Carolina, because this is a residential program, the utility will recover its compensation from residential customers. In contrast, under the mechanisms of Illinois

and Vermont, utility compensation is allocated and distributed across all customer classes, regardless of which customer class the program targets. For these states, the differences in the proportion of utility compensation allocated to each customer class is due to differences in cost allocation methodology between mechanisms, as well as lack of available data.<sup>8</sup>

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<sup>8</sup> Industrial customers take part in utility compensation for all energy efficiency programs in Illinois; it is not shown in this chart because there is missing data for that customer class input.

## Discussion

Through our review, we identified several structural commonalities across the cost recovery mechanisms of North Carolina, Illinois, and Vermont:

- Each allows utilities to recover direct program spending to offer energy efficiency programs. This includes capital costs, operation and maintenance expenses, incentive payments, and evaluation, measurement, and verification (EM&V) and other administrative and general (A&G) costs.
- Each direct utilities to recover total allowed compensation through a rider that imposes a small charge on each kilowatt-hour consumed by a customer.

However, several key differences also emerge across the state mechanisms:

- Utilities are not able to earn performance incentives under the IL Mechanism. The NC and VT Mechanisms both provide the opportunity to earn performance incentives, but they use different factors to determine the amount awarded. For most programs in North Carolina, incentives are calculated as a set percentage (currently 10.6 percent) of a program's estimated net dollar savings.<sup>9</sup> In Vermont, performance incentives are calculated as a percentage<sup>10</sup> of utility spending on capital costs and development and support services. This may have the effect of incentivizing a utility to spend more on energy efficiency programs, but the utility is only awarded a percentage of this amount if the program achieves a set of quantifiable performance indicators<sup>11</sup>.
- Only the NC Mechanism includes LRAM to compensate utilities for the reduction in electricity usage, and thus sales, from an energy efficiency program. This is referred to as "Net Lost Revenue" in North Carolina. Neither energy efficiency utility in Vermont, Efficiency Vermont nor Burlington Electric Department receives compensation for lost revenue.
- The NC and IL Mechanisms allow utilities to capitalize all eligible program spending and to amortize such costs over time. By contrast, the VT Mechanism directs utilities to expense costs and recover them contemporaneously (e.g., during the same year the program is offered).

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<sup>9</sup> The net dollar savings of a program are equal to the difference between the net present value of its avoided cost savings and the total utility spending to provide the program (known as "Total O&M costs" in North Carolina). Of note, performance incentives for income-qualified programs and weatherization programs are calculated using a slightly adjusted methodology; see the Appendix for more details.

<sup>10</sup> See the Appendix for these percentages.

<sup>11</sup> See the Appendix for a list of these indicators and an explanation of how the utility earns the incentive.

- Under the IL and VT Mechanisms, total utility compensation for offering a program is recovered from all customers, regardless of which customer class is targeted by a program. Still, Illinois and Vermont use different factors to allocate cost proportions to customer class.<sup>12</sup> In contrast, under the NC Mechanism, costs are only allocated to the customer class intended to benefit from a program. For example, this means that the costs of energy efficiency programs targeting residential customers are borne solely by the residential customer class.

## Implications

Through this model, we hope to provide state policymakers and advocates with a flexible tool to better understand the impact of cost recovery mechanisms on utility revenue and customer rates. This model can be run for any real or hypothetical energy efficiency program. Users may also customize a range of assumptions such as the discount rate and customer energy usage. And through efforts taken to standardize certain assumptions, users are better able to compare impacts across states.

Our comparison dashboard can help to translate seemingly small differences in policy design – and complex and technical calculations – into a more accessible visualization of impacts. We hope that this tool helps provide users with a deeper understanding of cost recovery mechanism, and improved awareness of different state approaches. This may allow them to consider alternative approaches to the design of cost recovery mechanisms in a way that might better support the policy objectives of their state.

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<sup>12</sup> Under the IL Mechanism, costs are allocated to customer classes based on an average of the most recent five year, actual Retail Customer Group costs and the customer class kWh usage. The actual Retail Customer Group costs are defined as the forecasted expenditures for approved energy efficiency measures. Under the VT Mechanism, costs are allocated to customer classes based on the previous year total electric rate revenue of the customer group and the customer class kWh usage. See the Appendix for more details.

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## Appendix: Modeling Documentation

### **Appendix 1: Model-Wide Simplifying Assumptions**

Below is a list of the assumptions and adjustments made to the model of each state's cost recovery mechanism to increase the comparability of results across the three states.

#### Focus on Impacts of a Single Program:

The model operates at the program level, focusing on calculating the financial impacts of a single energy efficiency program offered in a single year. Due to the design of certain cost recovery mechanisms, the financial impacts of a program may extend well beyond the year in which the program is offered. Our model is well-suited to calculate such multi-year financial impacts.

#### Program and Cost Recovery Timing:

The model assumes that utility spending to offer an energy efficiency program occurs in entirety at the beginning of year 1. This is a simplifying assumption, as it is unlikely that a utility would incur all expenses in totality in January.

The model also assumes that utility compensation begins annually starting in year 1 and at the beginning of each subsequent year for programs with cost recovery periods greater than one year. In reality, utility compensation is recovered on a monthly basis through customer bills.

#### Utility Program Spending:

Efforts were also taken to standardize the categories and naming of utility spending on energy efficiency programs across the three states. The model contains three inputs related to program spending: capital costs, development and support service costs, and A&G costs. In NC, capital costs are referred to as "total O&M costs," which are capitalized under the NC Mechanism. In NC and IL, development and support services are considered as a type of A&G cost and thus do not need to be separated out. However, in VT, development and support service costs are used in a separate calculation of compensation, and thus need to be separated from A&G as an individual line item.

If a user provides spending inputs using Vermont's three spending categories, the model will sum any development and support services costs with A&G costs for the purposes of modeling outputs under the IL and NC Mechanisms. Conversely, when modeling a program using the categories of spending inputs under NC or IL's Mechanisms, the A&G cost is assumed to be what VT defines as development and support services.

Of note, the NC Mechanism directs utilities to recover program-specific spending differently and separately than they are to recover portfolio-wide A&G costs. To allow for better comparison across states, the model allows users to input a spending amount reflective of the portion of portfolio A&G costs that the utility could be assumed to incur due for the one program under consideration. This portion of A&G costs are assumed to be comparable to the A&G costs that would be recovered under the IL or VT Mechanisms.

#### Definitions of Customer Classes:

North Carolina, Illinois, and Vermont differently define residential, commercial, and industrial customer classes. We chose to standardize the definitions used across states to the definition used by the U.S. Energy Information Association (EIA).

Specifically, the EIA defines customers into classes according to the service or purpose of the customer. For example, residential customers are customers “in single and multi-family dwelling and apartment and mobile homes” and the commercial sector “consists of service-providing facilities and equipment of businesses... private and public organizations...[etc.]” (EIA, n.d.).

#### Tax Effects:

Due to the lack of sufficient documentation and for the purpose of simplification, this model does not consider state or federal tax impact on utility revenue.

#### True-Ups:

This model also does not consider true ups. Rather, the model assumes 100% of achievement of projected or estimated utility expenditures and program impacts (participation, energy savings, etc.).

The following three tables provide a detailed explanation of North Carolina, Illinois, and Vermont’s cost recovery mechanisms. The left-hand column provides an in-depth explanation of how utility compensation and customer riders are calculated for a sample energy efficiency program. The righthand column contains a description of our modeling methodology, with a focus on detailing simplifying assumptions and/or deviations we made from a state’s stated methodology, with explanations where appropriate.

## Appendix 2: North Carolina’s Energy Efficiency Cost Recovery Mechanism<sup>13</sup>

The NC Mechanism was initially approved by the NCUC in Docket No. E-7, Sub 1032. Prospective updates were approved in a October 20, 2020 order in Docket No. E-2 Sub 931.

North Carolina: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology
Utility Recovery of Program Spending	<p>Types of utility program spending eligible for recovery:</p> <ul style="list-style-type: none"> <li>Utility may recover incurred costs or expenditures “directly attributable and expanded solely for a specific [... EE] program.” This includes capital costs (including the cost of capital, depreciation expenses, and property taxes), incentive payments to Program participants, as well as spending for: program management, O&amp;M, evaluation, EM&amp;V, A&amp;G, and any insurance payments.</li> <li>Spending must only reflect those jurisdictionally allocated to NC.</li> <li>Utilities may also recover portfolio-wide A&amp;G expenses (e.g., those not specific to a specific EE program). Such expenses are recovered separately.</li> </ul>	<ul style="list-style-type: none"> <li>Uses utility-reported data for program spending, program amortization period, and pre-tax WACC.</li> <li>Program spending must reflect only those jurisdictionally allocated to NC.</li> <li>Model includes, as a standalone line-item input, a percentage of non-program-specific A&amp;G costs, in order to allow for better comparison across states.</li> <li>When modelling a VT program in this mechanism, the development &amp; support services cost is summed into the A&amp;G costs.</li> </ul>
	<p><b>Cost Recovery Method</b></p> <ul style="list-style-type: none"> <li>The utility may capitalize all or part of eligible program spending incurred by the utility that are intended to produce future benefits. This means that program spending can be capitalized for measures that provide longer-term benefits, with payment of an ROR during the amortization period.</li> <li>For all unamortized amounts, the utility may earn an ROR equal to its net-of-tax WACC.</li> <li>Direct program spending is amortized over a period equal to the lesser of 3 years or a program’s measure life.<sup>14</sup></li> <li>Portfolio-level A&amp;G expenses have a 3-year amortization period.</li> </ul>	<ul style="list-style-type: none"> <li>The amount of amortized program spending recovered each year is equal to: <math>(\text{Total O\&amp;M Costs} / \text{Amortization Period}) * (1 + \text{WACC})^{(t-1)}</math>, where t = the year of cost recovery and the program is implemented in year 1</li> <li>Portfolio-level A&amp;G costs are recovered separately from program-specific costs, as they may have different amortization periods</li> </ul>

<sup>13</sup> This documentation describes the cost recovery mechanism used by DEP at the time of this report’s publication. NCUC requires the state’s three investor-owned utilities – DEP, DEC, and Dominion Energy – to use and follow slightly different cost recovery mechanisms. While these mechanisms are largely consistent, each contains minor differences to account for differences such as utility structure or customer base.

<sup>14</sup> In its cost recovery filing for Vintage Year 2023, DEP uses an amortization period of three years for all EE programs excluding its My Home Energy Report (MyHER) program, which has a cost recovery period of one year (i.e., contemporaneous cost recovery).

North Carolina: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology
Lost Revenue Adjustment	<p><b>Estimated Lost Revenues Eligible for Recovery</b></p> <ul style="list-style-type: none"> <li>The utility is allowed to recover the total revenue losses associated with NC retail kWh sales reductions resulting from an eligible EE program over the lesser of 1) 36 months after the start of the program, 2) when rates are reset due to a rate case or 3) the program’s lifetime. This is referred to as “Net Lost Revenue” or NLR in NC.<sup>15</sup></li> <li>Revenue losses are net of the fuel costs and non-fuel variable O&amp;M expenses avoided due to the program. Total recoverable lost revenue as measured for the 36-month period must be reduced by any increases in Net Found Revenues during the same periods.<sup>16</sup></li> </ul>	
	<p><b>Recovery Method for Lost Revenues</b></p> <ul style="list-style-type: none"> <li>The utility calculates lost revenue at the program level by multiplying the estimated reduction in kWh sales associated with a program by a margin-based NLR rate: <ul style="list-style-type: none"> <li>Lost Revenue (\$) = Lost Sales (kWh) x NLR Rate (\$/kWh)</li> <li>The NLR rate represents the difference between the average retail rate applicable to the customer class impacted by a program and the sum of (1) the embedded regulatory fees, (2) the related average customer charge component of that rate, (3) the average fuel component of the rate, and (4) the incremental variable O&amp;M rate.</li> </ul> </li> <li>The utility is not able to accrue an ROR on NLR.</li> <li>NLR recovery ceases upon the implementation of new rates in a general rate case, as new rates are set and calibrated to recover NLR.</li> </ul>	<p><i>Unable to find a detailed explanation of the calculations and assumptions defining program-level lost revenue recoveries over the 36-month period, including the NLR rate used.</i></p> <ul style="list-style-type: none"> <li>Uses utility-reported data for NLR recovered in Year 1</li> <li>For programs with a Measure Life greater than 1, uses utility-reported amount of NLR recovered in Year 1 and assumes the utility recovers twice that amount for each year of eligible NLR recovery (up to 36 months total)<sup>17</sup></li> <li>Assumed constant annual energy savings and NLR rates throughout the recovery period</li> <li>To simplify, assumes NLR recovery is not interrupted by a rate case</li> </ul>
	<p><b>Program Incentive Eligibility and Calculation</b></p>	<ul style="list-style-type: none"> <li>Requires inputs reflecting only the costs or benefits jurisdictionally allocated to NC (not SC)</li> </ul>

<sup>15</sup> Lost revenue recovery is only eligible for full-scale, commercialized, and cost-effective programs that have been approved by the NCUC. Programs focused on general awareness and education, as well as R&D activities, are ineligible to recover lost revenue.

<sup>16</sup> Net Found Revenues are defined as “any increases in revenues resulting from any activity by DEP’s public utility operations that causes a customer to increase demand or energy consumption.”

<sup>17</sup> Review of utility filings indicate that in most cases, a utility appears to earn up to 36 months of NLR over *four* years, with lower amounts recovered in years 1 and 4. It is assumed that these lower amounts are approximately six months’ worth of NLR recovery.

North Carolina: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology
Utility Performance Incentive	<p>EE programs may be eligible to receive one of two financial shared savings incentives: Portfolio Performance Incentives (PPIs) or Program Return Incentives (PRIs).<sup>18</sup> All eligible programs receive a PPI unless they are an income-qualified or weatherization program; such programs instead receive a PRI.</p> <p><b>1) Portfolio Performance Incentives (PPIs)</b></p> <ul style="list-style-type: none"> <li>PPIs are calculated as a set percentage (currently 10.6%) of a program’s net dollar savings. Net dollar savings are equal to the difference between a program’s 1) NPV of avoided cost savings<sup>19</sup> and 2) total O&amp;M cost.</li> </ul> <p><b>2) Program Return Incentives (PRIs)</b></p> <ul style="list-style-type: none"> <li>Beginning for vintage 2023 programs, the PRI is calculated as a set percentage (currently 10.6%) of the NPV of a program’s avoided cost savings.</li> </ul> <p>The amount of allowable incentives are not capped for individual programs. However, percentage caps do apply to the aggregate incentives awarded to the portfolio of programs (described later in this table).</p>	<ul style="list-style-type: none"> <li>Uses utility-report lifetime system avoided costs value as an assumed input (due to inability to locate a sufficient explanation the calculation of this value)</li> </ul>
	<p><b>Performance Incentive Recovery Method</b></p> <ul style="list-style-type: none"> <li>Once calculated, the incentive amount is converted into equal annual installments over the lesser of 3 years or the program’s measure life, using the utility’s WACC as a discount rate.</li> <li>PRIs &amp; PPIs are subject to corporate income taxes.</li> </ul>	
Portfolio-Level Adjustments to Incentives	<p><b>Portfolio-Level Savings-Based Incentives and Penalties</b></p> <ul style="list-style-type: none"> <li>Between 2022 and 2025, the utility is allowed to receive a stretch incentive of \$500,000 for achieving savings equal or greater than 1% of prior year retail sales.<sup>20</sup></li> <li>During these same years, the utility also faces a penalty for achieving savings less than 0.5% of opt-out adjusted savings achievements.</li> </ul>	Due to program-level focus, model does not address the portfolio-level cap or floor on PPIs

<sup>18</sup> Both incentives are only eligible for full-scale, commercialized programs. In addition, general awareness and education EE programs, as well as R&D activities, are ineligible to receive incentives.

<sup>19</sup> The NC Mechanism states, “The annual lifetime avoided cost savings for measurement units installed in the applicable Vintage Year shall be calculated by multiplying the number of each specific type of Measurement Unit projected to be installed in that Vintage Year by the most current estimates of each lifetime year’s per installation kW and kWh savings and by the most current estimates of each lifetime year’s per kW and kWh avoided costs.”

<sup>20</sup> G.S. 62-133.9 allows the NCUC to approve other incentives, including sharing of savings, rewards based on capitalization of a percentage of avoided costs achieved, or any other incentives the Commission determines to be appropriate.

North Carolina: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology
	<p><b>Portfolio-Level Caps on Incentive Percentages</b></p> <ul style="list-style-type: none"> <li>While the amount of allowable program spending is not capped for individual programs, as of 2022, the sum of lost revenues (also considered an incentive) and total PPI across the entire eligible portfolio cannot exceed 19.5% of total program spending (less the spending on income-qualified programs).<sup>21</sup> The PPI is also subject to a floor of 10% beginning in 2022, with the floor declining to 6% and then 2.5% for 2024.</li> </ul>	
<b>Cost Allocation</b>	<ul style="list-style-type: none"> <li><u>Across the NC/SC System</u>: Program spending are allocated to the NC and SC retail jurisdictions. For EE programs, program spending is allocated proportionally based on the annual energy requirements of NC and SC retail requirements.</li> <li><u>Within customer classes</u>: Program spending is only recovered from those customer classes to which a specific EE program is targeted. As such, separate EE riders are calculated for Residential, Non-Residential, and Lighting customer classes. No amount of program spending is allocated to wholesale jurisdictions. Program spending is allocated to applicable customers based on the annual revenue requirements associated with EE programs.</li> <li><u>Large Opt-out Customers</u>: Commercial customers that use 1,000,000 kWh of electricity or more per year and all industrials are eligible to opt out of contributing to the cost of and accessing or participating in the utility's EE programs.<sup>22</sup></li> </ul>	Requires cost inputs reflecting only those jurisdictionally allocated to NC (not SC)
<b>True-Up Adjustments</b>	<ul style="list-style-type: none"> <li>Utility compensation for an EE program is calculated based on estimated or expected costs and other data, not actual.</li> <li>Once actual program performance is determined through EM&amp;V, utility compensation is then recalibrated at the end of the year through a true-up process.</li> </ul>	<ul style="list-style-type: none"> <li>As noted, does not address impacts of true-up process</li> <li>Rather uses (and assumes achievement of) projected or estimated input values</li> </ul>

<sup>21</sup> This means that individual programs may earn incentives greater than 19.5% of program spending, but the aggregated PPI across the entire eligible portfolio of programs cannot exceed the cap.

<sup>22</sup> In 2021, approximately 61% of DEC's 2021 commercial and industrial energy consumption opted out of the utility's EE offerings (30,083 gigawatt-hours, or GWh, out of 49,305 GWh of DEC's non-residential retail sales) (NCUC, 2023).

### Appendix 3: Illinois' Energy Efficiency Cost Recovery Mechanism<sup>23</sup>

The IL Mechanism, referred to in Illinois as the Energy Efficiency Pricing and Performance rider, is defined in 220 ILCS 5/8-103B(d)(2).

Illinois: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology
<b>Utility Recovery of Program Spending</b>	<p><u>Revenue Requirement Calculation:</u> This reflects the program expenses for the utility to offer an EE program in the projection year. It is calculated from the following components using the following formula: revenue requirement = (rate of return * rate base) + operating expenses</p> <ul style="list-style-type: none"> <li>• <u>Rate Base:</u> This is the sum of the energy efficiency regulatory asset balance as of the end of the projection year net of accumulated deferred income taxes (“ADIT”) and accumulated amortization and the energy efficiency capital assets balance as of the end of the projection year net of ADIT and accumulated depreciation.</li> <li>• <u>Rate of Return:</u> This is calculated from the following formula: <math>ROR = \frac{1}{1 - \text{income tax rate}} * (\text{pretax WACC} - \text{tax effect of debt})</math></li> <li>• <u>Operating Expenses, Capacity Credits, and Other Revenues:</u> This is the sum of the amortization of the EE Regulatory asset, the depreciation of the EE Capital assets, permanent taxes, and other programs.</li> </ul>	<ul style="list-style-type: none"> <li>• The rate base is equivalent to the sum of capital costs and A&amp;G in the model.</li> <li>• The model assumes that the rate of return is equivalent to the pre-tax WACC because we do not incorporate the effect of taxes.</li> <li>• The model excludes operating expenses because taxes are not incorporated, and amortization occurs elsewhere.</li> <li>• When modelling a VT program in this mechanism, the development &amp; support services cost is summed into the A&amp;G costs.</li> </ul>
<b>Lost Revenue Adjustment</b>	Illinois does not allow utilities to recover for lost revenue.	
<b>Utility Performance Incentive</b>	Illinois does not provide an incentive for utilities to perform better on their EE programs.	
<b>Cost Allocation</b>	<p><u>EE Adjustment/ Rider EE Pricing and Performance:</u> The net EE revenue requirement calculated is allocated to the three customer classes (i.e., Residential, Small Commercial and Industrial (“C&amp;I”), and Large C&amp;I) based on the following steps:</p> <ul style="list-style-type: none"> <li>• Costs are assigned to each of the customer classes based on the average historical assigned costs of the respective group for up to the previous five years. Assigned costs are the forecasted expenditures for approved EE measures.</li> </ul>	<ul style="list-style-type: none"> <li>• The model reassigns the three customer classes, Residential, Small Commercial and Industrial (“C&amp;I”), and Large C&amp;I, into Residential, Commercial, and Industrial, respectively.</li> </ul>

<sup>23</sup> This documentation describes the cost recovery mechanism used by Commonwealth Edison Company (ComEd) at the time of this report’s publication.

Illinois: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology
	<ul style="list-style-type: none"> <li>Next, costs for the application year are then divided by the customer class kWh usage to obtain a cents per kWh EE Adjustment.</li> </ul>	
<b>True-Up Adjustments</b>	<p>The amount of utility revenue collected is calculated based on estimated or expected utility spending or other inputs. The previous year's utility revenue is also recalibrated to be included in the application year overall utility revenue, through a true-up process, which includes the reconciliation year adjustment and the reconciliation year revenue balancing adjustment.</p> <p><u>Reconciliation Year Adjustment:</u> This is the difference between the following:</p> <ul style="list-style-type: none"> <li><u>Reconciliation Year Initial Application Year EE Revenue Requirement:</u> This is the initial application year EE revenue requirement approved by the Commission when the current reconciliation year was under determination.</li> <li><u>Reconciliation Year EE Revenue Requirement:</u> This reflects actual spending incurred during the reconciliation year. <ul style="list-style-type: none"> <li>Adjusted for interest and taxes.</li> </ul> </li> </ul> <p><u>Reconciliation Year Revenue Balancing Adjustment:</u> This is the difference between:</p> <ul style="list-style-type: none"> <li>Actual revenue recorded under Rider EEPP in the reconciliation year.</li> <li>Revenue required to achieve the allowed rate of return on equity in effect in the reconciliation year.</li> </ul>	<ul style="list-style-type: none"> <li>As noted, the model does not address impacts of true-up process.</li> <li>Rather uses (and assumes achievement of) projected or estimated input values.</li> </ul>



## Appendix 4: Vermont's Energy Efficiency Cost Recovery Mechanism

The VT Mechanism, referred to as the Energy Efficiency Charge is defined in Commission Rule 5.300.

Vermont: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology																		
<b>Utility Recovery of Program Spending</b>	The proposed budget includes spending from electric resource acquisition, energy savings account, development & support services, PSD Evaluation, fiscal agent cost, and energy efficiency utility fund audit.	<ul style="list-style-type: none"> <li>The electric resource acquisition is categorized as capital costs.</li> <li>PSD evaluation, fiscal agent cost, EEU advertising, EEU fund audit, and triennial audit are categorized as A&amp;G costs.</li> <li>Development &amp; support services are a type of A&amp;G cost, but is separated out into its own item in the VT mechanism.</li> <li>When modelling a non-VT program, A&amp;G costs are assumed to be defined as development &amp; support services costs in VT.</li> </ul>																		
<b>Lost Revenue Adjustment</b>	Lost revenue from energy efficiency is not collected by Efficiency Vermont.																			
<b>Utility Performance Incentive</b>	<p>The performance incentive (referred to as the "performance award" in VT) and operations fee<sup>24</sup> are calculated from a percentage of the total cost of the electric resource acquisition and the development &amp; support fees. The percentages are as follows:</p> <table border="1"> <thead> <tr> <th></th> <th>2021</th> <th>2022</th> <th>2023</th> <th>2024</th> <th>2025 and on</th> </tr> </thead> <tbody> <tr> <td>Operations Fee</td> <td>1.35%</td> <td>1.00%</td> <td>0.75%</td> <td>0.50%</td> <td>0.00%</td> </tr> <tr> <td>Performance Award</td> <td>3.65%</td> <td>4.00%</td> <td>4.25%</td> <td>4.50%</td> <td>5.00%</td> </tr> </tbody> </table> <p>These percentages were determined in Docket Case No. 19-3272-PET.</p>		2021	2022	2023	2024	2025 and on	Operations Fee	1.35%	1.00%	0.75%	0.50%	0.00%	Performance Award	3.65%	4.00%	4.25%	4.50%	5.00%	<ul style="list-style-type: none"> <li>Because the model does not address true-up processes, it assumes that the utility will meet all performance indicators and thus, earn 100% of the performance award. This essentially removes the incentive for the utility to meet the performance indicators when using this model.</li> <li>The operations fee is not a performance incentive, but it is collected by the utility as a part of program revenue.</li> </ul>
	2021	2022	2023	2024	2025 and on															
Operations Fee	1.35%	1.00%	0.75%	0.50%	0.00%															
Performance Award	3.65%	4.00%	4.25%	4.50%	5.00%															

<sup>24</sup> The operations fee provides "financial stability to the operator of Efficiency Vermont in the years when performance awards are not distributed" (VEIC, 2021, p. 67). The operations fee will be completely phased out by 2025.

Vermont: Description of EE Cost Recovery Mechanism		Modeling Assumptions and Methodology
	The performance incentive is determined in the revenue requirement docket, but it represents what the utility <i>may</i> earn for meeting 100% of their quantifiable performance indicators <sup>25</sup> . It is not guaranteed that the utility meets 100% of their performance indicators and thus, the amount that the utility actually earns is determined in a later docket, which informs the true-up in the next revenue requirement docket.	
<b>Cost Allocation</b>	<p><u>Energy Efficiency Charge (EEC)</u></p> <ul style="list-style-type: none"> <li>For each rate class, the electric collection amount is adjusted for each rate class's rate revenue and forecasted kWh sales. The rate revenue is the revenue a utility receives from its retail electric sales. It is multiplied by each rate class's electric revenue percent to determine the total cost each rate class is responsible for in the EEC rate. The total kWh forecasted sales is the sum of the rate class kWh usage, net metering customer adjustment, and sales forecast adjustment from previous years for demand and non-demand customers in the respective rate class.</li> <li>To include taxes, the applicable gross receipts and taxes are applied to the calculated per kWh rate.</li> </ul>	<ul style="list-style-type: none"> <li>Within the model, the forecasted kWh sales will be used consistently across states no matter how each state defines it.</li> <li>Taxes are not incorporated into the model.</li> </ul>
<b>True-Up Adjustments</b>	<ul style="list-style-type: none"> <li>The rate revenue is adjusted by previous years over/under collection and by other adjustments and credits.</li> </ul>	<ul style="list-style-type: none"> <li>As noted, the model does not address impacts of true-up process.</li> <li>Rather uses (and assumes achievement of) projected or estimated input values.</li> </ul>

<sup>25</sup> Efficiency Vermont's Quantifiable Performance Indicators include total resource benefit, annual electricity savings, summer peak demand savings, winter peak demand savings, lifetime electricity savings, greenhouse gas reductions, and flexible load kW. Each Indicator is given an award weight, which is multiplied by the Performance Incentive to determine how much the utility may earn from meeting the 100 percent target of that Indicator. The utility must meet 75 percent of an Indicator's target before they may start earning any part of that award. The award weights can be found in